

## Prevalence of helminth parasites in domestic pigeons in Thrissur

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### Abstract

Examination of 92 viscera of pigeons in and around Thrissur revealed an overall prevalence of 75.0% of helminthic infection. Mixed infection of helminths (55.43%) was predominant than single infection (19.57%).

**Keywords:** Helminth, Pigeon.

### Introduction

Pigeons are widely used for experimental and table purposes in many parts of India. Infection with endoparasites can greatly affect the health and productivity of pigeons (Fowler, 1986). Earlier studies made by Malviya (1971) from Uttar Pradesh, Bhatnagar and Ruprah (1970) from Hisar and Reddy *et al.* (1992) from Bangalore reported various species of helminths infecting pigeons. The present study was carried out to generate more information about the endoparasites infecting pigeons in and around Thissur, Kerala.

### Materials and Methods

Viscera of 92 pigeons collected either from local meat market or those brought for post-mortem to the Department of Pathology, Kerala Agricultural University were examined. Different organs and the scrapings of intestinal tract were thoroughly examined for the presence of worms. The helminths collected were washed and stained with acetic alum carmine in case of trematodes and cestodes, while nematodes were cleared in lacto-phenol for identification (Soulsby, 1982).

### Results and Discussion

Out of 92 birds examined, 69 (75.0%) were found infected with helminthic infections. Of them, single infection was recorded in 18 (19.57%) birds, while mixed infection of helminths was encountered in 51 (55.43%)

birds. The percentage distribution of various species of helminths in single and mixed infections are presented in Table 1. The trematode parasites belonged to four genera viz., *Echinoparyphium* (1.44%), *Echinochasmus* (2.89%), *Posthodiplostomum* (1.44%) and *Apharyngostrigea* (1.44%) while the cestode parasites three genera viz., *Cotugnia*

Table 1. Helminths in single and mixed infection in pigeons

Parasite	Type of infection		Total
	Single infection	Mixed infection	
<b>Trematode</b>			
<i>Echinoparyphium</i> sp.	-	1	1 (1.44)
<i>Echinochasmus</i> sp.	1	1	2 (2.89)
<i>Posthodiplostomum</i> sp.	-	1	1 (1.44)
<i>Apharyngostrigea</i> sp.	1	-	1 (1.44)
<b>Cestode</b>			
<i>Cotugnia</i> sp.	4	17	21 (30.43)
<i>Hymenolepis</i> sp.	3	13	16 (23.18)
<i>Raillietina</i> sp.	1	13	14 (20.28)
<b>Nematode</b>			
<i>Ascaridia columbae</i>	2	7	9 (13.04)
<i>C. obsignata</i>	3	17	20 (28.98)
<i>O. quadriradiatus</i>	3	8	11 (15.94)
<i>S. avium</i>	-	2	2 (2.89)
<i>A. spiralis</i>	-	1	1 (1.44)

Figures in parenthesis indicate the percentages

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(30.43%), *Hymenolepis* (23.18%) and *Raillietina* (20.28%). The nematode parasites identified from pigeons were *Ascaridia columbae* (13.04%), *Capillaria obsignata* (28.98%), *Ornithostrongylus quadricolatus* (15.94%), *Strongyloides avium* (2.89%) and *Acuaria spiralis* (1.44%).

Increased prevalence of *Cotugnia* sp. (30.43%) observed in this study might be due to the wide accessibility of these birds to the infected intermediate hosts in the environment. Among the cestodes, *Cotugnia* sp. was found to be very common as also observed by Malviya (1971) in Uttar Pradesh. *Capillaria obsignata* was the predominant nematode species in the study, as earlier reported by Fowler (1986) and Reddy *et al.* (1992). The occurrence of the fowl nematodes *viz.*, *S. avium* and *A. spiralis* in pigeons constitute new host record of these parasites in India. In the backyard system of poultry keeping, the pigeons are commonly found sharing their food with chicken and feeding in and around the poultry yards. Sharing of feeders and waterers by fowls and pigeons often results in contamination of the yards by droppings from these bird species and by ingestion of infected intermediate hosts, cross transmission of parasitic infection is possible.

It was also observed that the squabs aged 25 to 28 days were naturally infected with mature worms of *C.*

*obsignata* and *O. quadricolatus* and immature worms of *A. columbae*. The infection might have been acquired from their parent birds through mouth feeding as reported in case of 'mouth canker' caused by *Trichomonas gallinae* (Lindquist, 1963).

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